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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/092,367

DATE: 03/20/2002

TIME: 16:19:35

Input Set : A:\2314-224-II.ST25.txt

Output Set: N:\CRF3\03202002\J092367.raw

3 <110> APPLICANT: University of Utah Research Foundation
 4 Cognetix, Inc.
 5 Olivera, Baldomero M
 6 McIntosh, J. Michael
 7 Garrett, James E.
 8 Walker, Craig S.
 9 Watkins, Maren
 10 Jones, Robert M.
 12 <120> TITLE OF INVENTION: Linear Gamma-Carboxyglutamate Rich Conotoxins
 14 <130> FILE REFERENCE: 2314-224-II
 C--> 16 <140> CURRENT APPLICATION NUMBER: US/10/092,367
 C--> 16 <141> CURRENT FILING DATE: 2002-03-07
 16 <150> PRIOR APPLICATION NUMBER: US 60/273,639
 17 <151> PRIOR FILING DATE: 2001-03-07
 19 <160> NUMBER OF SEQ ID NOS: 196
 21 <170> SOFTWARE: PatentIn version 3.0
 23 <210> SEQ ID NO: 1
 24 <211> LENGTH: 24
 25 <212> TYPE: PRT
 26 <213> ORGANISM: Conus ammiralis
 28 <220> FEATURE:
 29 <221> NAME/KEY: PEPTIDE
 30 <222> LOCATION: (1)..(24)
 31 <223> OTHER INFORMATION: Xaa at residue 1 is Gln or pygro-Glu; Xaa at residues 7, 8
 and 9
 32 is Glu or gamma-carboxy-Glu; Xaa at residues 13 and 16 is Lys, no
 33 r-Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys
 36 <400> SEQUENCE: 1
 W--> 38 Xaa Gly Gln Asp Asp Ser Xaa Xaa Xaa Asp Ser Gln Xaa Val Met Xaa
 39 1 5 10 15
 41 His Gly Gln Arg Arg Glu Arg Arg
 42 20
 44 <210> SEQ ID NO: 2
 45 <211> LENGTH: 17
 46 <212> TYPE: PRT
 47 <213> ORGANISM: Conus betulinus
 49 <220> FEATURE:
 50 <221> NAME/KEY: PEPTIDE
 51 <222> LOCATION: (1)..(17)
 52 <223> OTHER INFORMATION: Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-
 Glu; X
 53 aa at residue 17 is Pro or hydroxy-Pro
 56 <400> SEQUENCE: 2
 W--> 58 Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Leu Thr

59 1

5

10

15

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Input Set : A:\2314-224-II.ST25.txt

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W--> 61 Xaa

64 <210> SEQ ID NO: 3

65 <211> LENGTH: 17

66 <212> TYPE: PRT

67 <213> ORGANISM: Conus betulinus

69 <220> FEATURE:

70 <221> NAME/KEY: PEPTIDE

71 <222> LOCATION: (1)..(17)

72 <223> OTHER INFORMATION: Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; X

73 aa at residue 17 is Pro or hydroxy-Pro

76 <400> SEQUENCE: 3

W--> 78 Gly Gly Xaa Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr

79 1

5

10

15

W--> 81 Xaa

84 <210> SEQ ID NO: 4

85 <211> LENGTH: 17

86 <212> TYPE: PRT

87 <213> ORGANISM: Conus betulinus

89 <220> FEATURE:

90 <221> NAME/KEY: PEPTIDE

91 <222> LOCATION: (1)..(17)

92 <223> OTHER INFORMATION: Xaa at residues 3, 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; X

93 aa at residue 17 is Pro or hydroxy-Pro

96 <400> SEQUENCE: 4

W--> 98 Asp Gly Xaa Xaa Val Arg Xaa Ala Ala Xaa Thr Leu Asn Xaa Leu Thr

99 1

5

10

15

W--> 101 Xaa

104 <210> SEQ ID NO: 5

105 <211> LENGTH: 18

106 <212> TYPE: PRT

107 <213> ORGANISM: Conus betulinus

109 <220> FEATURE:

110 <221> NAME/KEY: PEPTIDE

111 <222> LOCATION: (1)..(18)

112 <223> OTHER INFORMATION: Xaa at residues 3, 7, 10, 14, 16 and 17 is Glu or gamma-carboxy-G

113 lu

116 <400> SEQUENCE: 5

W--> 118 Gly Tyr Xaa Asp Asp Arg Xaa Ile Ala Xaa Thr Val Arg Xaa Leu Xaa

119 1

5

10

15

W--> 121 Xaa Ala

124 <210> SEQ ID NO: 6

125 <211> LENGTH: 17

126 <212> TYPE: PRT

127 <213> ORGANISM: Conus betulinus

129 <220> FEATURE:

130 <221> NAME/KEY: PEPTIDE

131 <222> LOCATION: (1)..(17)

132 <223> OTHER INFORMATION: Xaa at residues 4, 7, 10 and 14 is Glu or gamma-carboxy-Glu; Xaa

133 at residue 17 is Pro or hydroxy-Pro

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136 <400> SEQUENCE: 6
W--> 138 Gly Gly Gly Xaa Val Arg Xaa Ser Ala Xaa Thr Leu His Xaa Ile Thr
139 1 5 10 15
W--> 141 Xaa
144 <210> SEQ ID NO: 7
145 <211> LENGTH: 18
146 <212> TYPE: PRT
147 <213> ORGANISM: Conus bullatus
149 <220> FEATURE:
150 <221> NAME/KEY: PEPTIDE
151 <222> LOCATION: (1)..(18)
152 <223> OTHER INFORMATION: Xaa at residue 2 is Pro or hydroxy-Pro; Xaa at residues 3,
7, 10,
153 14, 16 and 17 is Glu or gamma-carboxy-Glu; Xaa at residue 5 is T
154 yr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phospho
155 -Tyr or nitro-Tyr
158 <400> SEQUENCE: 7
W--> 160 Asn Xaa Xaa Thr Xaa Ile Xaa Ile Val Xaa Ile Ser Arg Xaa Leu Xaa
161 1 5 10 15
W--> 163 Xaa Ile
166 <210> SEQ ID NO: 8
167 <211> LENGTH: 20
168 <212> TYPE: PRT
169 <213> ORGANISM: Conus bullatus
171 <220> FEATURE:
172 <221> NAME/KEY: PEPTIDE
173 <222> LOCATION: (1)..(20)
174 <223> OTHER INFORMATION: Xaa at residue 2 is Pro or hydroxy-Pro; Xaa at residues 3,
6, 9,
175 12, 16, 18 and 19 is Glu or gamma-carboxy-Glu; Xaa at residue 5 i
176 s Tyr, mono-halo-Tyr, di-halo-Tyr, 125I-Tyr, O-sulpho-Tyr, O-phos
177 pho-Tyr or nitro-Tyr
180 <400> SEQUENCE: 8
W--> 182 Asn Xaa Xaa Thr Xaa Xaa Asn Leu Xaa Leu Val Xaa Ile Ser Arg Xaa
183 1 5 10 15
W--> 185 Leu Xaa Xaa Ile
186 20
188 <210> SEQ ID NO: 9
189 <211> LENGTH: 19
190 <212> TYPE: PRT
191 <213> ORGANISM: Conus catus
193 <220> FEATURE:
194 <221> NAME/KEY: PEPTIDE
195 <222> LOCATION: (1)..(19)
196 <223> OTHER INFORMATION: Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-
carboxy-Gl
197 u
200 <400> SEQUENCE: 9
W--> 202 Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
203 1 5 10 15
W--> 205 Xaa Arg Asn
208 <210> SEQ ID NO: 10

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209 <211> LENGTH: 19
210 <212> TYPE: PRT
211 <213> ORGANISM: Conus catus
213 <220> FEATURE:
214 <221> NAME/KEY: PEPTIDE
215 <222> LOCATION: (1)..(19)
216 <223> OTHER INFORMATION: Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-
carboxy-Gl
217      u
220 <400> SEQUENCE: 10
W--> 222 Gly Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Leu
223 1      5      10      15
W--> 225 Xaa Arg Asp
228 <210> SEQ ID NO: 11
229 <211> LENGTH: 19
230 <212> TYPE: PRT
231 <213> ORGANISM: Conus catus
233 <220> FEATURE:
234 <221> NAME/KEY: PEPTIDE
235 <222> LOCATION: (1)..(19)
236 <223> OTHER INFORMATION: Xaa at residues 3, 4, 8, 11, 15 and 17 is Glu or gamma-
carboxy-Gl
237      u
240 <400> SEQUENCE: 11
W--> 242 Ser Asp Xaa Xaa Leu Leu Arg Xaa Asp Val Xaa Thr Val Leu Xaa Pro
243 1      5      10      15
W--> 245 Xaa Arg Asn
248 <210> SEQ ID NO: 12
249 <211> LENGTH: 17
250 <212> TYPE: PRT
251 <213> ORGANISM: Conus catus
253 <220> FEATURE:
254 <221> NAME/KEY: PEPTIDE
255 <222> LOCATION: (1)..(17)
256 <223> OTHER INFORMATION: Xaa at residues 2, 3, 7, 10 and 14 is Glu or gamma-carboxy-
Glu
259 <400> SEQUENCE: 12
W--> 261 Ile Xaa Xaa Gly Leu Ile Xaa Asp Leu Xaa Thr Ala Arg Xaa Arg Asp
262 1      5      10      15
264 Ser
267 <210> SEQ ID NO: 13
268 <211> LENGTH: 17
269 <212> TYPE: PRT
270 <213> ORGANISM: Conus catus
272 <220> FEATURE:
273 <221> NAME/KEY: PEPTIDE
274 <222> LOCATION: (1)..(17)
275 <223> OTHER INFORMATION: Xaa at residues 2, 3, 7, 10 and 14 is Glu or gamma-carboxy-
Glu
278 <400> SEQUENCE: 13
W--> 280 Ile Xaa Xaa Gly Leu Ile Xaa Asp Leu Xaa Ala Ala Arg Xaa Arg Asp
281 1      5      10      15
283 Ser

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Input Set : A:\2314-224-II.ST25.txt

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286 <210> SEQ ID NO: 14
287 <211> LENGTH: 29
288 <212> TYPE: PRT
289 <213> ORGANISM: Conus catus
291 <220> FEATURE:
292 <221> NAME/KEY: PEPTIDE
293 <222> LOCATION: (1)..(29)
294 <223> OTHER INFORMATION: Xaa at residues 2, 4, 10 and 16 is Glu or gamma-carboxy-Glu;
Xaa
295      at residues 3, 9, 25 and 28 is Pro or hydroxy-Pro; Xaa at residue
296      26 is Trp (D or L) or halo-Trp (D or L)
299 <220> FEATURE:
300 <221> NAME/KEY: PEPTIDE
301 <222> LOCATION: (1)..(29)
302 <223> OTHER INFORMATION: Xaa at residue 29 is Lys, nor-Lys, N-methyl-Lys, N,N-
dimethyl-Lys
303      or N,N,N-trimethyl-Lys
306 <400> SEQUENCE: 14
W--> 308 Gly Xaa Xaa Xaa Val Gly Ser Ile Xaa Xaa Ala Val Arg Gln Gln Xaa
309 1          5          10          15
W--> 311 Cys Ile Arg Asn Asn Asn Arg Xaa Xaa Cys Xaa Xaa
312          20          25
314 <210> SEQ ID NO: 15
315 <211> LENGTH: 17
316 <212> TYPE: PRT
317 <213> ORGANISM: Conus distans
319 <220> FEATURE:
320 <221> NAME/KEY: PEPTIDE
321 <222> LOCATION: (1)..(17)
322 <223> OTHER INFORMATION: Xaa at residues 5, 6, 8 and 12 is Glu or gamma-carboxy-Glu
325 <400> SEQUENCE: 15
W--> 327 Thr Ile Thr Ala Xaa Xaa Ala Xaa Arg Thr Ser Xaa Arg Met Ser Ser
328 1          5          10          15
330 Met
333 <210> SEQ ID NO: 16
334 <211> LENGTH: 19
335 <212> TYPE: PRT
336 <213> ORGANISM: Conus distans
338 <220> FEATURE:
339 <221> NAME/KEY: PEPTIDE
340 <222> LOCATION: (1)..(19)
341 <223> OTHER INFORMATION: Xaa at residue 1 is Gln or pyro-Glu; Xaa at residues 2, 7,
8, 10
342      and 14 is Glu or gamma-carboxy-Glu; Xaa at residues 4 and 6 is Pr
343      o or hydroxy-Pro
346 <400> SEQUENCE: 16
W--> 348 Xaa Xaa Thr Xaa Thr Xaa Xaa Xaa Val Xaa Arg His Thr Xaa Arg Leu
349 1          5          10          15
351 Lys Ser Met
354 <210> SEQ ID NO: 17
355 <211> LENGTH: 15
356 <212> TYPE: PRT

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Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

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Input Set : A:\2314-224-II.ST25.txt

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L:16 M:270 C: Current Application Number differs, Replaced Current Application No
L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:38 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:58 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:61 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:78 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:81 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:98 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:101 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:118 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:138 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:160 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:163 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:182 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:185 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:202 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:205 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:222 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:225 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:242 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:245 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:261 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:280 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:308 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:311 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:327 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:348 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:369 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:414 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:417 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:443 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:446 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:467 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:486 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
L:505 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:508 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:525 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:546 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:549 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:567 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:570 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:595 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:598 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:623 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:626 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28

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L:651 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:654 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:679 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
L:682 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
L:744 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:34
L:756 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:35